



Volume 6.20: May 20, 2024

Publications of the Week

## Gene Editing for *CEP290*-Associated Retinal Degeneration

First Author: Eric Pierce (pictured) | Senior Author: Mark Pennesi The New England Journal of Medicine | Mass Eye and Ear and Harvard Medical School



CEP290-associated inherited retinal degeneration causes severe early-onset vision loss due to pathogenic variants in CEP290. This study looked at EDIT-101, a CRISPR-Cas9 gene-editing complex designed to treat inherited retinal degeneration caused by a specific damaging variant in intron 26 of CEP290, in a small phase 1–2 study. Abstract | Press Release

# The Intrinsic Substrate Specificity of the Human Tyrosine Kinome

First Author: Tomer Yaron-Barir | Senior Authors: Lewis Cantley, Benjamin Turk, Michael Yaffe (pictured), and Jared Johnson

Nature | Dana-Farber Cancer Institute, Harvard Medical School, MIT, and Beth Israel Deaconess Medical Center



Phosphorylation of proteins on tyrosine (Tyr) residues evolved in metazoan organisms as a mechanism of coordinating tissue growth. This study shows that the intrinsic substrate specificity of Tyr kinases has remained fundamentally unchanged from worms to humans, suggesting that the fidelity between Tyr kinases and their protein substrate sequences has been maintained across hundreds of millions of years of evolution. Abstract

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Awards

# Merkin Prize in Biomedical Technology Awarded to F. William Studier for **Development of Widely Used Protein- and RNA-Production Platform**

**Broad Institute** 



Dr. F. William Studier (pictured) of Brookhaven National Laboratory has won the Richard N. Merkin Prize in Biomedical Technology for his development of an efficient, scalable method of producing RNA and proteins in the laboratory. His technology can be used to make large quantities of nearly any RNA or protein and is a mainstay of biomedical research and pharmaceutical production. Read More

#### New \$15 Million Grant to Dana-Farber Scientists Supports Research into **Innovative Approaches to Endometrial Cancer Treatment** Dana-Farber Cancer Institute



Physician-scientists at Dana-Farber Cancer Institute have received a five-year, \$15 million Program Project Grant from the National Cancer Institute for research in endometrial cancer, which arises in the inner lining of the uterus and strikes more than 68,000 women a year in the US. Project leads will include Drs. Ursula Matulonis (pictured), Panagiotis Konstantinopoulos, and Joyce Liu. Read More

#### 2024 NSF Graduate Research Fellowship Recipients and Honorable **Mentions** Boston University Biology



The awardees and honorable mentions for the 2024 National Science Foundation (NSF) Graduate Research Fellowship Program competition were announced. Kristen Harder, Dylan Mankel, and Elif Ozsen were awarded with three-year graduate research fellowships. Catherine Gill, Victoria Guarino, and Yu (Emily) Yang (pictured) received honorable mentions. Read More

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Local News

# Science for Living: Gut Microbiome Offers Clues to Chronic Disease

UMass Chan Medical School



The way to a person's health may be through their stomach, to paraphrase an old saying. Or at least it may lie in the multitude of micro-organisms that inhabit the intestine, an ecosystem known as the gut microbiome, according to UMass Chan Medical School researchers like Dr. Beth McCormick (pictured), Director of the Center for Microbiome Research. Read More

## Research Spotlight: How Inflammation Damages Synapses in an **Experimental Model of Multiple Sclerosis**

Massachusetts General Hospital



Dr. Rebecca Gillani (pictured), a Physician Investigator in the Department of Neurology at Massachusetts General Hospital and an Instructor in Neurology at Harvard Medical School, is the lead author of a recently published paper in Brain, Behavior, and Immunity about multiple sclerosis. She discusses her methods and results in a Q&A. Read More

#### Meet a Whitehead Postdoc: Jordana Bloom Whitehead Institute



Many women experience a variety of changes with menopause, and yet we know very little about the underlying biology. Dr. Jordana Bloom (pictured) is a postdoc in Whitehead Institute Member Dr. David Page's lab studying how hormonal changes during menopause affect gene expression throughout the body. The Whitehead Institute sat down with Dr. Bloom to learn more about her and her experiences in and out of the lab. Read More

## Flagship Pioneering and Metaphore Biotechnologies Announce Research Collaboration with Novo Nordisk to Develop Next-Generation Therapeutics for Obesity Management PR Newswire



company designing novel therapeutics by combining machine learning and molecular mimicry, joined Flagship Pioneering in announcing a research collaboration with Novo Nordisk to develop up to two next-generation therapeutics for obesity management. Read More

Boston-based Metaphore Biotechnologies, a Flagship-founded biotechnology

#### Science Behind Targeted Drug for Pediatric Brain Cancer Has Dana-Farber Roots Dana-Farber Cancer Institute



Dana-Farber's Dr. Charles Stiles (pictured) remembers the call. It was 2008 and a colleague phoned from a conference to deliver the news. Two separate research teams had discovered a genetic driver for the most common of childhood brain tumors called pediatric low-grade glioma. The problem of finding a genetic target to improve treatment for this disease seemed to be solved. Read More

## **Design Center's STEM Pathways Event BU** Today

Boston Teens Pitch Biotech Concepts to BU "Investors" at Biological



BU's Biological Design Center's Synthetic Biology Shark Tank Competition. No actual dollars were invested in these on-paper concepts, but the experience taught the students valuable skills and got them thinking like real engineers and biotech developers. Read More

New Mission High School seniors Darareaksmey Chhim (pictured, left), Mario Fils (middle), and Dorian Planto (right) pitched their plastic-eating bacteria concept at

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**Upcoming Events in Boston Mutational Scanning Symposium 2024** May 22 - 24 8:00 AM

**Broad Institute Consortium for Health Innovation Partnerships** June 8 9:00 AM MGH Institute of Health Professions

June 10 **Lighting Up Neurobiology with Antibodies** 8:30 AM Marshall A. Wolf Conference Center

Generative AI in Medical Research & Drug Development: Hype or June 10 - 11 Reality? 12:30 PM Northeastern University

The Festival of Genomics & Biodata

Boston Convention and Exhibition Center

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Senior Research Support Associate, Nedivi Lab Picower Institute for Learning & Memory

Science Jobs in Boston

June 12 - 13 8:00 AM

Postdoctoral Research Fellow, Biology Boston College

Scientist, Immunology Prox Bio

**Research Investigator** Takeda

Scientist, Gene Editing Platform Intellia Therapeutics

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